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ABSTRACT

The purpose of this study was to examine child-selected play activities of three-, four-, and five-year-old children to determine whether the choices reflected society's traditionally sex stereotyped labels. Subjects were 50 students enrolled in two nursery school programs at a midwestern university during the autumn of 1979. Three observers recorded the number of different boys or girls that participated in the following activities: art projects, house play, wheeled vehicles, sand or water, blocks, climbing apparatus, books, and table activities. The data were collected in 30 minute observation periods over six consecutive weeks. Several findings differ from previous studies. While all four traditionally female-oriented play activities (house play, books, art projects, and table activities) were chosen more by girls than by boys, the difference was not statistically significant at the .05 level. Boys choose the traditionally male-oriented play activities: wheeled vehicles and sand/water, more than girls did. Girls chose the traditionally male-oriented climbing apparatus more frequently than boys did. Differences for these three activities were not significant at the .05 level. Block play was the only activity revealing sex differences at the .05 level. Significantly more boys than girls played with blocks. It is suggested that the changing societal attitude and the national movement toward eliminating sexism is reflected in the play activities of young children. (Author/RH)

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A STUDY OF SEX STEREOTYPING IN CHILD-SELECTED PLAY ACTIVITIES OF PRESCHOOL CHILDREN

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CHAPTER I

INTRODUCTION

Sexism limits the potential of all people. In the last decade, society as a whole, as well as most teachers, became aware of sexism in the society and in the schools.

The Civil Right's Movement, the Equal Right's Movement, the so-called sexual revolution of the 1960's, the Feminist Movement, and a prevailing atmosphere of questioning many previously unquestioned attitudes and institutions led to the realization that there was indeed sexism in the society and in the schools.

In the past, it commonly was believed that innate differences were present at birth accounting for the sex role differentiation. While biological differences remain a human constant between the sexes, recent research indicates that most behavioral sex differences are not present at birth.[1]

Today, the importance of the cultural influences in the development of sex role differentiation is recognized. Examination of sex stereotyping in textbooks, television programs, school curriculums, career counseling procedures, and hiring and promotion practices direct attention to cultural influences. Environmental shaping of sex differentiated behavior does exist.

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[1]Beverly Birns, "The Emergence and Socialization of Sex Differences in the Earliest Years," Merrill-Palmer Quarterly 22 (1976): 229-254.

For the past decade, an awareness of sexism has permeated the media, industry, government, and education. Literature and research, as well as legislation, have focused attention to the need for eliminating sexism.

Research indicates sex differences in play activities and toy preferences as early as one year of age.[2] According to Millar, "In most societies differences in play between boys and girls are not merely expected, but actively encouraged."[3]

These sex differences are observed in the child's self-selected play activities. In the 1964 edition of Child Development, Hurlock stated:

> Given the same environment and the same toys, boys and girls display no real differences in their play activities until the gang age. But inasmuch as there are in most homes, different toys for members of the two sexes, children become aware at an early age that certain types of play are considered appropriate for boys and others for girls.[4]

In Hurlock's 5th edition of 1972, the social pressures for children to play in sex appropriate manners were discussed again.[5] The researchers were interested in knowing if the changing societal attitudes toward sexism had made this observation less true today than when it was

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[2]Michael Lewis, "Sex Differences in Play Behavior of the Very Young," Journal of Health, Physical Education and Recreation 43 (1972): 38-39.

[3]Susanna Millar, "Differences Between the Play of Boys and Girls," The Psychology of Play (Baltimore: Penquin Books, 1963), 194-197.

[4]Elizabeth B. Hurlock, Child Development, 4th ed. (New York: McGraw-Hill Book Company, 1964), 479-480.

[5]Elizabeth B. Hurlock, Child Development, 5th ed. (New York: McGraw-Hill Book Company, 1972), 292.

written in 1964.[6]

Purpose of the Study

The purpose of this research was to study child-selected play activities of three-, four-, and five-year-old children to determine whether the choices reflected society's traditionally sex stereotyped labels.

The Hypotheses

The purpose of the study and the review of the research led to the following predictions which were stated as hypotheses:

1. A significantly larger number of girls than boys will choose house play as a child-selected play activity.

2. A significantly larger number of girls than boys will choose books as a child-selected play activity.

3. A significantly larger number of girls than boys will choose art projects as a child-selected play activity.

4. A significantly larger number of girls than boys will choose table activities as a child-selected play activity.

5. A significantly larger number of boys than girls will choose blocks as a child-selected play activity.

6. A significantly larger number of boys than girls will choose wheeled vehicles as a child-selected play activity.

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[6]Hurlock, Child Development, 4th ed., 479-480.

7. A significantly larger number of boys than girls will choose climbing apparatus as a child-selected play activity.

8. A significantly larger number of boys than girls will choose water or sand as a child-selected play activity.

Significance of the Study

Society cannot afford the loss of any human potential. Has the changing societal attitude toward sexism eliminated the sex stereotyped choices of three-, four-, and five-year-old children in self-selected play activities? If societal changes are not being brought about in the homes--we need to know. Are the children selecting activities on the basis of stereotyping as traditionally male- or female-oriented? If so, early childhood programs must be designed to diminish sex stereotyping in play behaviors.

Definition of Terms

Sexism. "Attitudes, actions, or beliefs which relegate one sex to a secondary status."[7]

Child-Selected Play Activities. Activities freely chosen by the students at a given time.

Male-Oriented Play Activities. Activities traditionally considered appropriate for boys.

Female-Oriented Play Activities. Activities traditionally considered appropriate for girls.

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[7]Patricia Brown and Hopkin Davies, "Sexism in Education: A Review of the ERIC Data Base," Journal of Teacher Education 26 (1975): 356-359.

Nursery School Programs. Programs for three-, four-, and five-year-old children operated by a department of elementary education at a midwestern university.

CHAPTER II

REVIEW OF RELATED RESEARCH

Some of the earliest empirical research conducted on the study of play (1896 Crosswell, 1898 McGhee, 1921 Terman) focused on sex differences.[1] However, most of the studies concentrated only on boy-girl game preferences. The data was obtained by administering questionnaires to children ranging in age from six- to eighteen-years-old. The findings were all similar, girls played games traditionally considered "feminine" and boys played games traditionally considered "masculine." In addition, they found more variety in the play activities of boys as compared with girls.

In Parten's 1933 study, a follow-up of her 1932 study on social participation among preschool children, the focus was age differences.[2] However, she did discuss incidentally some sex differences. Males were observed playing more often with blocks and vehicles. Parten

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[1] B. Sutton-Smith and B. G. Rosenberg, "Sixty Years of Historical Change in Game Preferences of American Children," cited by R. E. Herron and Brian Sutton-Smith, ed., Child's Play (New York: John Wiley and Sons, Inc., 1971), 18-50.

[2] Mildred B. Parten, "Social Play Among Preschool Children," Journal of Abnormal and Social Psychology 28 (1933): 136-147.

reported, "Girls were engaged in painting 59 percent of the time...."[3]

Later researchers (1956 Brown, 1959 Rosenberg and Sutton-Smith) continued the trend to investigate boy-girl game preferences of school-age children as the principle area of study of sex differences in the play of children.[4] These studies concluded that differences between the sexes had been reduced considerably during the past thirty years. For girls, there was a much greater variety of activities and an increasing incorporation of masculine activities. In the 1896, 1898, and 1921 studies, girls did not list baseball as a game they liked to play; however, baseball was one of the girls' game preferences in the 1956 and 1959 studies.

Since the 1970's, researchers have expanded their studies beyond boy-girl game preferences of older children. Newer research has examined sex differences of young children in a variety of play situations.

Lewis has concluded "...that sex role appropriate behavior is already established by one year of age."[5] In his study of year-old children, he found girls preferred stuffed animals and boys played more with non-toys (dustballs, doorknobs, and electrical outlets). Girls used more fine motor activity and boys more gross motor activity.

The toy preferences of twenty-month-old boys and girls was

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[3]Ibid, p. 146.

[4]Sutton-Smith, cited in Child's Play, 18-50.

[5]Michael Lewis, "Sex Differences in Play Behavior of the Very Young," Journal of Health, Physical Education and Recreation 43 (1972): 38-39.

observed by Fein, et al. The twenty-four children were allowed to play with six toys, three "male" toys (hammer, truck, gun) and three "female" toys (bracelet, doll, iron). They reported, "Boys played with boy toys more than girls did and girls played with more girl toys than boys did."[6]

Several studies have identified sex differences in the play activities of children three to five years of age and, thus, were most pertinent to this present study.

The first study of Harper and Sanders was conducted in a university nursery school.[7] In 1971-72, a group of thirty-two children, whose average age was fifty-three months, was observed. The procedure was repeated in 1972-73 with a younger group with an average age of forty-five months. The findings for both years were similar. Boys spent more time outdoors than girls playing in sand, on a tractor, and on a climbing structure. Girls played more indoors at art and craft tables and in the kitchen.

Sanders and Harper's second study was continued in the same university nursery school during the 1973-74 and 1974-75 school years.[8] This time they focused on the fantasy play of forty-two children ages three to five years. Boys spent a greater proportion of their time in fantasy play than did girls. Although the types of fantasy play engaged

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[6]Greta Fein et al., "Sex Stereotypes and Preferences in the Toy Choices of 20-Month-Old Boys and Girls," Developmental Psychology 11 (1975): 527-528.

[7]Lawrence V. Harper and Karen M. Sanders, "Preschool Children's Use of Space: Sex Differences in Outdoor Space," Developmental Psychology 11 (1975): 119.

[8]Karen M. Sanders and Lawrence V. Harper, "Free-Play Fantasy Behavior in Preschool Children: Relations among Gender, Age, Season, and Location," Child Development 47 (1976): 1182-1185.

in by boys was not given, they reported girls played "house" and "school" more than boys.

Utilizing twelve British preschool centers, Tizard, Philps, and Plewis observed 109 three- and four-year-old children.[9] The major sex differences reported were in the choice of play materials and in the themes of symbolic play. Girls played more than boys on fixed physical equipment such as a climbing frame. Boys spent more time with wheeled vehicles and outdoor equipment such as crates, tires, and ladders. In their fantasy play, girls were more likely to choose domestic themes, while boys pretended to drive cars, trains, or airplanes.

Rubin believes there has been little change in the last forty years regarding the play preferences of boys and girls "...despite the more recent emphasis on non-sexist stereotyping."[10] In his 1976 study, he found the most frequently observed preschool activities were as follows: (1) cutting, pasting, and art construction; (2) painting and crayoning; (3) playdough; (4) house play, store, doctor, and fire fighter; (5) vehicles; (6) sand and water; (7) blocks; (8) science; (9) books; and (10) puzzles. His findings, he said, replicated Parten's 1933 findings. That was, girls were significantly more likely to be involved in cutting, pasting, and painting and boys were significantly more likely to be playing with vehicles and blocks.

Wolf has attempted to promote "sex-inappropriate" play behavior

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[9]Barbara Tizard, Janet Philps, and Ian Plewis, "Play in Pre-School Centres - I. Play Measures and Their Relation to Age, Sex, and I.Q.," Journal of Child Psychology and Psychiatry and Allied Disciplines 17 (1976): 251-264.

[10]Rubin, "Play Behavior," 21.

in six-, seven-, and eight-year-old children.[11,12,13] He has utilized three different treatment conditions; live peer models, televised peer models, and adult models.

His first study in 1973 utilized live peer models in a naturalistic setting, a summer camp.[11] A same- or opposite-sex model would play with a sex-inappropriate toy for the subject. A truck with a tire on it and an oven with a kettle on it were designated as the male- and female-appropriate toys, respectively. Wolf found sex-inappropriate play behavior was promoted for both boys and girls when exposed to the same-sex live peer model relative to opposite-sex live peer model.

Subjects were exposed to televised peer models in a classroom setting for Wolf's second study in 1975.[12] A doll was the female-appropriate toy and a fire truck was the male-appropriate toy. With this treatment, there was only a significant difference for girl subjects. Girls played consistently more with sex-inappropriate toys than did boys. And girls' play behavior with the sex-inappropriate toy was promoted most when exposed to the same-sex televised peer model.

In Wolf's third study of 1976, adults modeled play with toys that were sex-inappropriate, again in the naturalistic (camp) setting.[13] Male-

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[11] Thomas M. Wolf, "Effects of Live Modeled Sex-Inappropriate Play Behavior in a Naturalistic Setting," Developmental Psychology 9 (1973): 120-123.

[12] _____, "Response Consequences to Televised Modeled Sex-Inappropriate Play Behavior," The Journal of Genetic Psychology 127 (1975): 35-44.

[13] _____, "Effects of Live Adult Modeled Sex-Inappropriate Play Behavior in a Naturalistic Setting," The Journal of Genetic Psychology 128 (1976): 27-32.

appropriate toys were tools, car, and football and female-appropriate toys were dishes, doll, and baton. Once again, girls played more with inappropriate toys than did boys. However, contrary to his prediction, the children were not influenced in their play behavior by the adult modeling conditions.

Other research, which is less pertinent to this study, reports sex differences in the play of young children. Just two will be mentioned here to illustrate the point. Smilansky found, that in pre-school children, females significantly demonstrated more sociodramatic play than males.[14]

Melson reported no sex differences in the activity role and in the use of space for four-year-old children.[15] However, on two other measures sex differences were obtained. Girls distributed their attention among social and nonsocial stimuli more evenly than did boys. Boys received a significantly higher mean score for duration of peer play than did girls.

Still other research has examined sex differences in the play of older children. As an example, Lever conducted a study of fifth-grade children.[16] The following major sex differences were reported: (1) boys play outdoors more than girls; (2) boys more often play in larger

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[14]Sara Smilansky, The Effects of Sociodramatic Play on Disadvantaged Preschool Children (New York: John Wiley and Sons, Inc., 1968).

[15]Gail F. Melson, "Sex Differences in Use of Indoor Space by Preschool Children," Perceptual and Motor Skills 44 (1977): 207-213.

[16]Janet Lever, "Sex Differences in the Games Children Play," Social Problems 23 (1976): 478-487.

groups; (3) boys play in more mixed-age groups; (4) boys' games are less sex-segregated; and (5) boys' games last longer than girls'.

CHAPTER III

PROCEDURES

Subjects

The subjects for this study were fifty students enrolled in two nursery school programs at a midwestern university during the autumn of 1979.

Permission for the children to participate in the study was obtained from the parents (see Appendix A).

One of the nursery schools had two sessions. One session was held in the morning and the other was conducted in the afternoon. The morning session (Group I) included nine females and eight males. Eight females and nine males were used from the afternoon program (Group II).

The other nursery school had one afternoon session. Eight females and eight males were registered in this group (Group III).

All of the children in the three sessions were included in the study. The subjects were twenty-five females and twenty-five males.

TABLE 1

DISTRIBUTION OF CHILDREN BY SEX

Group	Female	Male
I	9	8
II	8	9
III	8	8
Totals	25	25
N = 50		

The age range of the subjects was from thirty-six months to sixty-four months.

TABLE 2

DISTRIBUTION OF CHILDREN BY AGE*

Group	Years-Months 3.0-3.5	Years-Months 3.6-3.11	Years-Months 4.0-4.5	Years-Months 4.6-4.11	Years-Months 5.0-5.5
I	0	0	6	8	3
II	2	1	8	5	1
III	5	8	1	2	0
Totals	7	9	15	15	4
N = 50					

* As of September 24, 1979

The fifty subjects represented children of the university students, children of the university faculty, and children from the community at large. The researchers believed the subjects represented a typical nursery school group.

TABLE 3

DISTRIBUTION OF STUDENT/FACULTY/COMMUNITY CHILDREN

Group	Student Child	Faculty Child	Community Child
I	2	3	12
II	0	3	14
III	11	3	2
Totals N = 50	13	9	28

Child-Selected Play Activities

Rubin's 1976 study was utilized as the basis for selecting which play activities were available to the children of this study.[1] Rubin found the most frequently observed preschool activities were as follows:

(1) cutting, pasting, and art construction
(2) painting and crayoning
(3) playdough
(4) house play, store, doctor, and fire fighter
(5) vehicles

[1] Kenneth H. Rubin, "Play Behaviors of Young Children," Young Children 32 (1977): 21.

(6) sand and water
(7) blocks
(8) science
(9) books
(10) puzzles

Some modifications were made to the Rubin list for this study. The first three activities were combined into one large category, art projects. The puzzle activity was expanded to include other table activities such as Lego and Tinker Toys. Science was not included because the preschool programs utilized in this study teach science as a teacher-directed activity and not as a child-selected activity. Climbing apparatus was an additional activity because the previous experience of the researchers demonstrated it was a popular activity with children. Thus, the eight play activities available for this study were as follows:

(1) art projects
(2) house play
(3) wheeled vehicles
(4) sand or water
(5) blocks
(6) climbing apparatus
(7) books
(8) table activities

See Appendix B for a complete list of play activity toys and materials.

Next, the eight play activities were classified as those traditionally considered to be male-oriented or female-oriented. The male/female classification was as follows:

Traditionally Male-Oriented Play Activities

(1) wheeled vehicles
(2) sand or water
(3) blocks
(4) climbing apparatus

Traditionally Female-Oriented Play Activities

(1) art projects
(2) house play
(3) books
(4) table activities

These traditional labelings of male- or female-oriented activities come from the common beliefs society holds in regard to sex stereotyping. Boys are more active, noisier, and messier than girls. Girls are less active, quieter, and neater than boys. Boys excel in large muscle activities and girls in fine muscle activities.

Research confirmed some and challenged others of these traditional male/female labels. Wheeled vehicles,[2,3,4] water and sand,[3] and blocks[2] as male-oriented activities were corroborated by research data. House play[3] and art projects[2,3] as female-oriented activities were verified by research. There were conflicting findings for climbing apparatus. Harper and Sanders[3] reported boys spent more time on the climbing structure, while Tizard[4] found girls played more on the climbing frame. No sex differences were reported for books or puzzles (table activities).

Six child-selected activities (wheeled vehicles, sand or water, blocks, climbing apparatus, art projects, and table activities) were available nine out of the eighteen observation days. House play and

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[2]Rubin, "Play Behaviors of Young Children," 21.

[3]Lawrence V. Harper and Karen M. Sanders, "Preschool Children's Use of Space: Sex Differences in Outdoor Space," Developmental Psychology 11 (1975): 119.

[4]Barbara Tizard, Janet Philps, and Ian Plewis, "Play in Pre-School Centres - I. Play Measures and Their Relation to Age, Sex, and I.Q.," Journal of Child Psychology and Psychiatry and Allied Disciplines 17 (1976): 251-264.

books were available on each of the observation days because the physical layout of the preschool facilities prevented their exclusion. See Appendix C for a schedule of child-selected play activities.

Instruments and Observations

An observation instrument was designed by the researchers to record the number of different boys or girls that participated in each child-selected activity (see Appendix D).

A weekly tally form was used to record the frequency boys played with each activity and the frequency with which the girls selected the activity (see Appendix E).

The data were collected for six consecutive weeks beginning on September 24, 1979, and concluding on October 31, 1979 (see Appendix C). The nursery schools were in session on Monday, Tuesday, and Wednesday of each week, for a total of eighteen observation days.

The duration of each observation was thirty minutes. The child must have persisted at the activity for three minutes before the child's name was recorded on the observation instrument.

Observers

Three graduate assistants from Ball State University served as the observers for this study. All three observers had previous experience in working with and observing young children. The observers were trained by the researchers during the week of September 17, 1979. An orientation was held in which the observers were briefed on the instruments to be used in the study, and assigned a group to observe (see Appendix F).

Prior to the actual data collection, the observers practiced using the instruments in the nursery session to which they were assigned. The observers were not advised as to the purpose of the study.

Classroom Teachers

The three graduate assistants assigned to teach in the three preschool programs were informed of the procedures that would take place in the classroom; but, were not advised as to the purpose of the study.

Analysis of Data

For each of the eight child-selected play activities an analysis of data was conducted. Each day the number of different boys and of different girls selecting a particular play activity was recorded. Then, the percent of boys and of girls selecting a particular play activity was computed for each observation day.

From the daily data, the average number of boys and of girls and the average percent of boys and of girls selecting a particular play activity was computed for the total observation period.

Finally, a chi square was performed for each of the eight child-selected play activities. The chi square statistic is designed to test hypothesis of the difference between observed frequency and expected frequency. The Yates Correction was used for frequencies less than five. The level of significance was set at .05 to determine whether the difference between the number of boys and of girls selecting a particular play activity was statistically significant.

CHAPTER IV

RESULTS OF DATA ANALYSIS

The subjects were fifty preschool children, twenty-five males and twenty-five females.

The eight child-selected play activities were as follows:

Traditionally Male-Oriented	Traditionally Female-Oriented
blocks	house play
wheeled vehicles	books
climbing apparatus	art projects
water/sand	table activities

The children were observed three days a week for six weeks. Two play activities, house play and books, were available on the eighteen observation days. Six play activities (art projects, table activities, blocks, wheeled vehicles, climbing apparatus, and water/sand) were available on nine observation days.

A detailed description of the statistical procedure will be described in the first child-selected play activity, house play, but will not be repeated for the other seven activities. Only tables and results will be given for these.

House Play

The number of different boys and of different girls selecting house play on each of the eighteen observation days is shown in Table 4. Using this number and the number of boys and of girls present that day,

the percent of boys and of girls selecting the activity was computed. This data also are given in Table 4.

From the daily number of boys and of girls selecting house play and the daily attendance, averages were computed. Table 4 presents the average number of boys and of girls and the average percent of boys and of girls selecting house play during the total eighteen days.

As shown in Table 4, more girls and a higher percentage of girls chose house play as a child-selected play activity.

A chi square was used to test the null hypothesis of no difference in the number of boys and of girls selecting house play. The Yates corrections was used for frequencies less than five. The formula for computing this statistic was as follows:

$$\chi^2 = \Sigma \frac{(f_o - f_e)^2}{f_e}$$

The observed frequency (f_o) was the average number of boys and of girls selecting house play. The expected frequency (f_e) was obtained by adding the average number of boys and of girls, then, dividing by two. This was based on the premise that if the play activity was not sex stereotyped, half the children selecting house play should be boys and half should be girls. The data for chi square are summarized in Table 5.

TABLE 4

THE DAILY AND THE AVERAGE
NUMBER AND PERCENT OF BOYS/GIRLS
SELECTING HOUSE PLAY

Observation Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Average for Observation Period
Boys Present	23	22	22	22	24	23	25	23	22	25	21	24	23	22	22	21	23	24	22.8
Boys Selecting Activity	4	7	3	3	1	4	3	0	3	4	6	2	6	10	5	7	8	5	4.5
Percent of Boys Selecting Activity	17.4	31.8	13.6	13.6	4.2	17.4	12.0	0.0	13.6	16.0	28.6	8.3	26.1	45.5	22.7	33.3	34.8	20.8	19.7
Girls Present	25	25	24	23	23	25	22	22	24	23	24	23	21	22	21	21	23	23	23.0
Girls Selecting Activity	7	8	13	8	6	5	3	1	5	5	6	11	5	5	11	8	9	9	6.9
Percent of Girls Selecting Activity	28.0	32.0	54.2	34.8	26.1	20.0	13.6	4.5	20.8	21.7	25.0	47.8	23.8	22.7	52.4	38.1	39.1	39.1	30.0

TABLE 5

THE CHI SQUARE TABLE FOR

HOUSE PLAY

Subjects	Observed Frequency	Expected Frequency
Boys	4.5	5.7
Girls	6.9	5.7

The chi square value needed to reject the null hypothesis at the .05 level of significance with one degree of freedom was 3.84. The chi square value obtained was 0.17 and, therefore, the null hypothesis was not rejected. There was no significant difference in the number of boys and of girls selecting house play.

Books

The number of different boys and of different girls and the percent of boys and of girls selecting books on each of the eighteen observation days is given in Table 6.

Also, presented in this table are the average number of boys and of girls and the average percent of boys and of girls selecting books during the total eighteen days.

As shown in Table 6, more girls and a higher percentage of girls chose books as a child-selected play activity.

TABLE 6

THE DAILY AND THE AVERAGE
NUMBER AND PERCENT OF BOYS/GIRLS
SELECTING BOOKS

Observation Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Average for Observation Period
Boys Present	23	22	22	22	24	23	25	23	22	25	21	24	23	22	22	21	23	24	22.8
Boys Selecting Activity	5	7	6	2	5	4	3	7	3	0	2	0	2	2	5	5	1	1	3.3
Percent of Boys Selecting Activity	21.7	31.8	27.3	9.1	20.8	17.4	12.0	30.4	13.6	0.0	9.5	0.0	8.7	9.1	22.7	23.8	4.3	4.2	14.5
Girls Present	25	25	24	23	23	25	22	22	24	23	24	23	21	22	21	21	23	23	23.0
Girls Selecting Activity	5	6	6	6	10	4	7	7	3	6	6	3	5	5	4	2	4	1	5.0
Percent of Girls Selecting Activity	20.2	24.0	25.0	26.1	43.5	16.0	31.8	31.8	12.5	26.1	25.0	13.0	23.8	22.7	19.0	9.5	17.4	4.3	21.7

The data for chi square are summarized in Table 7. The chi square value needed to reject the null hypothesis was 3.84. The chi square value obtained was 0.06 and, therefore, the null hypothesis was not rejected. There was no significant difference in the number of boys and of girls selecting books.

TABLE 7

THE CHI SQUARE DATA FOR

BOOKS

Subjects	Observed Frequency	Expected Frequency
Boys	3.3	4.2
Girls	5.0	4.2

Art Projects

The number of different boys and of different girls and the percent of boys and of girls selecting art projects on each of the nine observation days is given in Table 8.

Also, presented in this table are the average number of boys and of girls and the average percent of boys and of girls selecting art projects during the total nine days.

As shown in Table 8, more girls and a higher percentage of girls chose art projects as a child-selected play activity.

TABLE 8

THE DAILY AND THE AVERAGE
NUMBER AND PERCENT OF BOYS/GIRLS
SELECTING ARTS PROJECTS

Observation Day	1	2	3	4	5	6	7	8	9	Average for Observation Period
Boys Present	23	22	22	25	23	22	23	22	22	22.7
Boys Selecting Activity	8	7	4	16	10	9	7	7	9	8.6
Percent of Boys Selecting Activity	34.8	31.8	18.2	64.0	43.5	40.9	30.4	31.8	40.9	37.9
Girls Present	25	25	24	22	22	24	21	22	21	22.9
Girls Selecting Activity	8	16	14	14	16	18	12	12	14	13.8
Percent of Girls Selecting Activity	32.0	640	58.3	636	72.7	75.0	57.1	54.5	66.7	60.3

The data for chi square are summarized in Table 9. The chi square value needed to reject the null hypothesis was 3.84. The chi square value obtained was 1.21 and, therefore, the null hypothesis was not rejected. There was no significant difference in the number of boys and of girls selecting art projects.

TABLE 9

THE CHI SQUARE DATA FOR

ART PROJECTS

Subjects	Observed Frequency	Expected Frequency
Boys	8.6	11.2
Girls	13.8	11.2

Table Activities

The number of different boys and of different girls and the percent of boys and of girls selecting table activities on each of the nine observation days is given in Table 10.

Also, presented in this table are the average number of boys and of girls and the average percent of boys and of girls selecting table activities during the total nine days.

As shown in Table 10, more girls and a higher percentage of girls chose table activities as a child-selected play activity.

TABLE 10

THE DAILY AND THE AVERAGE
NUMBER AND PERCENT OF BOYS/GIRLS
SELECTING TABLE ACTIVITIES

Observation Day	1	2	3	4	5	6	7	8	9	Average for Observation Period
Boys Present	22	24	23	25	21	24	21	23	24	23.0
Boys Selecting Activity	14	10	7	16	7	16	10	11	17	12.0
Percent of Boys Selecting Activity	63.6	41.7	30.4	64.0	33.3	66.7	47.6	47.8	70.8	52.2
Girls Present	23	23	25	23	24	23	21	23	23	23.1
Girls Selecting Activity	16	11	14	15	13	12	14	13	8	12.9
Percent of Girls Selecting Activity	69.6	47.8	56.0	65.2	54.2	52.2	66.7	56.5	34.8	55.8

The data for chi square are summarized in Table 11. The chi square value needed to reject the null hypothesis was 3.84. The chi square value obtained was 0.03 and, therefore, the null hypothesis was not rejected. There was no significant difference in the number of boys and of girls selecting table activities.

TABLE 11

THE CHI SQUARE DATA FOR

TABLE ACTIVITIES

Subjects	Observed Frequency	Expected Frequency
Boys	12.0	12.5
Girls	12.9	12.5

Blocks

The number of different boys and of different girls and the percent of boys and of girls selecting blocks on each of the nine observation days is given in Table 12.

Also, presented in this table are the average number of boys and of girls and the average percent of boys and of girls selecting blocks during the total nine days.

As shown in Table 12, more boys and a higher percentage of boys chose blocks as a child-selected play activity.

TABLE 12

THE DAILY AND THE AVERAGE
NUMBER AND PERCENT OF BOYS/GIRLS
SELECTING BLOCKS

Observation Day	1	2	3	4	5	6	7	8	9	Average for Observation Period
Boys Present	23	22	22	25	23	22	23	22	22	22.7
Boys Selecting Activity	10	13	16	12	15	16	17	12	16	14.1
Percent of Boys Selecting Activity	43.5	59.1	72.7	48.0	65.2	72.7	73.9	54.5	72.7	62.1
Girls Present	25	25	24	22	22	24	21	22	21	22.9
Girls Selecting Activity	7	6	6	4	9	5	1	4	4	5.1
Percent of Girls Selecting Activity	28.0	24.0	25.0	18.2	40.9	20.8	4.8	18.2	19.0	22.3

The data for chi square are summarized in Table 13. The chi square value needed to reject the null hypothesis was 3.84. The chi square value obtained was 4.22 and, therefore, the null hypothesis was rejected. There was a significant difference in the number of boys and of girls selecting blocks.

TABLE 13

THE CHI SQUARE DATA FOR

BLOCKS

Subjects	Observed Frequency	Expected Frequency
Boys	14.1	9.6
Girls	5.1	9.6

Wheeled Vehicles

The number of different boys and of different girls and the percent of boys and of girls selecting wheeled vehicles on each of the nine observation days is given in Table 14.

Also, presented in this table are the average number of boys and of girls and the average percent of boys and of girls selecting wheeled vehicles during the total nine days.

As shown in Table 14, more boys and a higher percentage of boys chose wheeled vehicles as a child-selected play activity.

TABLE 14

THE DAILY AND THE AVERAGE
NUMBER AND PERCENT OF BOYS/GIRLS
SELECTING WHEELED VEHICLES

Observation Day	1	2	3	4	5	6	7	8	9	Average for Observation Period
Boys Present	22	24	23	25	21	24	21	23	24	23.0
Boys Selecting Activity	14	19	16	14	11	13	10	8	6	12.3
Percent of Boys Selecting Activity	63.6	79.2	69.6	56.0	52.4	54.2	47.6	34.8	25.0	53.5
Girls Present	23	23	25	23	24	23	21	23	23	23.1
Girls Selecting Activity	9	7	7	6	6	7	7	6	4	6.6
Percent of Girls Selecting Activity	39.1	30.4	28.0	26.1	25.0	30.4	33.3	26.1	17.4	28.6

The data for chi square are summarized in Table 15. The chi square value needed to reject the null hypothesis was 3.84. The chi square value obtained was 1.72 and, therefore, the null hypothesis was not rejected. There was no significant difference in the number of boys and of girls selecting wheeled vehicles.

TABLE 15

THE CHI SQUARE DATA FOR

WHEELED VEHICLES

Subjects	Observed Frequency	Expected Frequency
Boys	12.3	9.5
Girls	6.6	9.5

Climbing Apparatus

The number of different boys and of different girls and the percent of boys and of girls selecting climbing apparatus on each of the nine observation days is given in Table 16.

Also, presented in this table are the average number of boys and of girls and the average percent of boys and of girls selecting climbing apparatus during the total nine days.

As shown in Table 16, more girls and a higher percentage of girls chose climbing apparatus as a child-selected play activity.

TABLE 16

THE DAILY AND THE AVERAGE
NUMBER AND PERCENT OF BOYS/GIRLS
SELECTING CLIMBING APPARATUS

Observation Day	1	2	3	4	5	6	7	8	9	Average for Observation Period
Boys Present	22	24	23	25	21	24	21	23	24	23.0
Boys Selecting Activity	13	17	11	14	14	12	8	8	9	11.8
Percent of Boys Selecting Activity	59.1	70.8	47.8	56.0	66.7	50.0	38.1	34.8	37.5	51.3
Girls Present	23	23	25	23	24	23	21	23	23	23.1
Girls Selecting Activity	16	15	18	12	12	12	8	10	10	12.6
Percent of Girls Selecting Activity	69.6	65.2	72.0	52.2	50.0	52.2	38.1	43.5	43.5	54.5

The data for chi square are summarized in Table 17. The chi square value needed to reject the null hypothesis was 3.84. The chi square value obtained was 0.03 and, therefore, the null hypothesis was not rejected. There was no significant difference in the number of boys and of girls selecting climbing apparatus.

TABLE 17

THE CHI SQUARE DATA FOR

CLIMBING APPARATUS

Subjects	Observed Frequency	Expected Frequency
Boys	11.8	12.2
Girls	12.6	12.2

Water/Sand

The number of different boys and of different girls and the percent of boys and of girls selecting water/sand on each of the nine observation days is given in Table 18.

Also, presented in this table are the average number of boys and of girls and the average percent of boys and of girls selecting water/sand during the total nine days.

As shown in Table 18, more boys and a higher percentage of boys chose water/sand as a child-selected activity.

TABLE 18

THE DAILY AND THE AVERAGE
NUMBER AND PERCENT OF BOYS/GIRLS
SELECTING WATER/SAND

Observation Day	1	2	3	4	5	6	7	8	9	Average for Observation Period
Boys Present	23	22	22	25	23	22	23	22	22	22.7
Boys Selecting Activity	14	13	15	14	8	16	14	11	12	13.0
Percent of Boys Selecting Activity	60.9	59.1	68.2	56.0	34.8	72.7	60.9	50.0	54.5	57.7
Girls Present	25	25	24	22	22	24	21	22	21	22.9
Girls Selecting Activity	18	11	8	5	12	14	8	10	6	10.2
Percent of Girls Selecting Activity	72.0	44.0	33.3	22.7	54.5	58.3	38.1	45.5	28.6	44.5

The data for chi square are summarized in Table 19. The chi square value needed to reject the null hypothesis was 3.84. The chi square value obtained was 0.34 and, therefore, the null hypothesis was not rejected. There was no significant difference in the number of boys and of girls selecting water/sand.

TABLE 19

THE CHI SQUARE DATA FOR

WATER/SAND

Subjects	Observed Frequency	Expected Frequency
Boys	13.0	11.6
Girls	10.2	11.6

Further Analysis of Block Play

Block play was the only child-selected activity that produced a statistically significant difference between the number of boys and of girls choosing it. Therefore, further analysis was conducted on block play.

Block play, as a child-selected activity, was available on nine observation days. The number of boys each of the fifty subjects chose block play was tabulated. The results of this analysis are shown in Table 20.

TABLE 20

FREQUENCY OF BLOCK PLAY BY BOY/GIRL SUBJECTS

Number of Days Blocks Selected	Number of Boys in Category	Number of Girls in Category
0	0	5
1,2	3	12
3,4	7	6
5,6	8	2
7,8	6	0
9	1	0

Five of the girls never selected blocks as a play activity, while all of the boys selected blocks at least once. The largest number of girls chose blocks once or twice, yet the largest number of boys chose blocks five or six times. Seven of the boys played with blocks on seven, eight, or nine days, but none of the girls played with blocks more than six days.

CHAPTER V

SUMMARY

The purpose of this research was to study child-selected play activities of three-, four-, and five-year-old children to determine whether the choices reflected society's traditionally sex stereotyped labels.

The fifty subjects were enrolled in nursery school programs under the auspices of a department of elementary education at a mid-western university in the autumn of 1979. The twenty-five males and twenty-five females ranged in age from thirty-six months to sixty-four months.

Modifying Rubin's list of the most frequently observed pre-school activities, eight child-selected play activities were examined.[1] On the basis of cultural tradition, the play activities were labeled as male- or female-oriented.

Traditionally Male-Oriented	Traditionally Female-Oriented
blocks	house play
wheeled vehicles	books
climbing apparatus	art projects
water/sand	table activities

An observation instrument to record the child's daily choices of play activities was developed by the researchers. Three graduate

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[1]Kenneth H. Rubin, "Play Behaviors of Young Children," Young Children 32 (1977): 21.

students were observers. The children were observed three days a week for six weeks. Two play activities, house play and books, were available on the eighteen observation days. Six play activities (art projects, table activities, blocks, wheeled vehicles, climbing apparatus, and water/sand) were available on nine observation days.

First, the data were analyzed by the number and the percent of boys and of girls selecting each play activity. Then, the chi square test was utilized to determine if the difference in the number of boys and of girls selecting each play activity was statistically significant.

Findings

All four of the traditionally female-oriented play activities (house play, books, art projects, and table activities) were chosen by a larger number and percent of girls than of boys. However, the difference between the number of boys and of girls selecting the activities was not statistically significant at the .05 level. Therefore, house play, books, art projects, and table activities were not sex stereotyped, but play activities chosen by both boys and girls. These findings differ from earlier studies which found house play and art projects to be female-oriented. In agreement with previous research, no sex differences were found for books and table activities.

Two of the traditionally male-oriented play activities, wheeled vehicles and water/sand, were chosen by a larger number and percent of boys than of girls. However, the difference between the number of boys and of girls selecting the activities was not statistically significant at the .05 level. Therefore, wheeled

vehicles and water/sand were not sex stereotyped, but play activities chosen by both boys and girls. These findings differ from earlier studies which found wheeled vehicles and water/sand to be male-oriented.

One of the traditionally male-oriented play activities, climbing apparatus, was chosen by a larger number and percent of girls than of boys. However, the difference between the number of boys and of girls selecting the activity was not statistically significant at the .05 level. Therefore, climbing apparatus was not sex stereotyped, but a play activity chosen by both boys and girls. This finding of no sex difference tends to explain the conflicting research of earlier studies, one reported more boys and another more girls played with climbing apparatus.

The fourth traditionally male-oriented play activity, blocks, was the only play activity to produce statistically significant sex differences at the .05 level. Blocks was a sex stereotyped activity with a significantly larger number of boys than of girls playing with them. This finding corroborated that of earlier studies.

Conclusions

Limited by the population, the instrument, and the statistical procedure utilized in this research, the presence of sex stereotyping in child-selected play activities had diminished markedly from that reported in earlier studies. Of the eight child-selected play activities examined, only one, blocks, continues to be sex stereotyped and to mirror the traditional label of male-oriented.

It would appear from this study that the changing societal attitude and the national movement toward eliminating sexism is being reflected in the play activities of young children.

Recommendations for Further Study

The following recommendations are made for further study:

1. The data collected in this study should be analyzed by individual subjects. This would produce additional insights into sex differences in play activities.

2. A follow-up study should be conducted later in the year to determine if changes have occurred in the play activities. Does sex stereotyping of play activities increase with age as suggested by Hurlock?[2]

3. This study examined the most frequently observed play activities of young children. Are other play activities of young children sex stereotyped?

4. If play activities are not selected on the basis of sex stereotyping, further study should examine other variables such as peer interaction.

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[2]Elizabeth B. Hurlock, Child Development, 5th ed. (New York: McGraw-Hill Book Company, 1972), 192.

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APPENDIX A

Letter of Permission

BALL STATE UNIVERSITY MUNCIE, INDIANA 47306

TEACHERS COLLEGE
Department of Elementary Education

September 17, 1979

Dear Parents:

We will be conducting a study to determine what children choose to do during child-selected activities. Our study will begin on September 24th and continue until October 31st.

While the children are participating in the regular child-selected activities, observers will keep a checklist on the activities chosen.

All information about an individual child's selection of activities will be kept confidential. Also, you may withdraw your child from this study at any time and without prejudice.

If your child may be included, please sign below and return it to us on Wednesday, September 19, 1979.

Thank you.

Sincerely,

Betty Beeson

Dr. Betty Beeson

Ann Williams

Dr. Ann Williams

I give permission for my child's _____
(name of child)
participation in Dr. Beeson's and Dr. Williams' study.

Parent Signature _____

Date _____

APPENDIX B

LIST OF PLAY ACTIVITY

TOYS AND MATERIALS

1. Wheeled Vehicles
2. Blocks
3. Water or Sand Table
4. Climbing Apparatus
   a. Jungle Gym
   b. Balance Beam
   c. Slide
5. Art Projects
   a. Crayons
   b. Easel
   c. Finger Painting
   d. Collage
   e. Play Dough
6. Table Activities
   a. Puzzles
   b. Lego Toys
   c. Tinker Toys
   d. Peg Boards
   e. Lacing Cards
7. House Play
   a. Dress-up Clothes
   b. Dolls
   c. Dishes
   d. Doctor and Nurse Toys
8. Books

APPENDIX C

SCHEDULE FOR CHILD-SELECTED PLAY ACTIVITIES

WEEK 1 (September 24, 25, 26)

House Play
Books
Blocks
Art Projects
Water/Sand

WEEK 2 (October 1, 2, 3)

House Play
Books
Wheeled Vehicles
Table Activities
Climbing Apparatus

WEEK 3 (October 8, 9, 10)

House Play
Books
Blocks
Art Projects
Water/Sand

WEEK 4 (October 15, 16, 17)

House Play
Books
Wheeled Vehicles
Table Activities
Climbing Apparatus

WEEK 5 (October 22, 23, 24)

House Play
Books
Blocks
Art Projects
Water/Sand

WEEK 6 (October 29, 30, 31)

House Play
Books
Wheeled Vehicles
Table Activities
Climbing Apparatus

APPENDIX D

Observer Checklist Sheet

CHILD-SELECTED ACTIVITIES

L-L-L _____ Date _____ Observer _____

Scheidler _____ Time _____ Class _____

Name of Activity	Child's Name								
1. House Play									
2. Books									
3. _____									
4. _____									
5. _____									

APPENDIX E

Weekly Tally Sheet

Week of _____

Group _____

Name of Activity	Monday B	Monday G	Tuesday B	Tuesday G	Wednesday B	Wednesday G	Total for the Week B	Total for the Week G
1. House Play								
2. Books								
3.								
4.								
5.								

Absent:

Boys _____ _____ _____ _____

Girls _____ _____ _____ _____

APPENDIX F

DIRECTIONS FOR OBSERVERS CHECKLIST SHEET

1. Observation should be made during Child-Selected Activity:

   L-L-L

   Morning 9:00 - 9:30 a.m.

   Afternoon 1:00 - 1:30 p.m.

   SCHEIDLER

   Afternoon 1:00 - 1:30 p.m.

2. Observation is to be for thirty minutes.

3. Write on your Observation Checklist Sheet the three additional activities that are available on each observation day.

4. The child must persist at the activity for at least three minutes before entering on the observation sheet.

5. When a child has participated in the activity for three minutes, record his or her name by the appropriate activity.